

## ***Interactive comment on “Recent changes in climate, hydrology and sediment load in the Wadi Abd, Algeria (1970–2010)” by M. Achite and S. Ouillon***

### **Anonymous Referee #2**

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The authors didn't present a thorough critical study of the solid matters measurements. In order to carry out a work on the impact of climate changes on this phenomenon, such a study is a much needed.. What does the portion of suspended matter represent in the total sediment transport? What does the soils erosion represent in these values measured at the basin mouth? Remini Boualem showed, in Algeria, that banks ablation is a significant proportion of in the sediment transport in Algeria, what about the banks ablation in your work? In order to be able to study the relationship between Climate Change and the sediment transport. This phenomenon has connection with the extreme events which also are synonyms of climate change. Also, the vegetational cover evolution that has a predominant role in the soils erosion is not mentioned. The climate

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changes directly affect this evolution and the spatial and temporal evolution of sediment transport as a result. In my view, the authors should first deal with those aspects prior to undertaking the statistic study of the measurements series which were not criticized rigorously. The coefficients obtained along the paper have no physical meaning without extending the intervening phenomena that interact in the phenomenon accountable for the production of those solid matters at the mouth. All the parties: erosion, ablation. . . must be evaluated in order to take account only of the party which can be in connection with the change in pluviometric and hydrometric mechanisms.

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